

REMARKS

The Applicants thank the Examiner for the thorough consideration given the present application. Claims 73-82, 84-90, 97-100, 105-108, 110-115 and 123-128 are currently under consideration in this application. Claims 83, 101 and 109 have been cancelled. Claims 91-96, 102-104 and 116-122 are withdrawn from consideration. The Examiner is respectfully requested to reconsider her rejections in view of the amendments and remarks as set forth below.

Telephone Interview

Applicants note with appreciation the telephone conversation held with Examiner Jackson on September 13, 2004. During that conversation, the outstanding rejection was discussed and possible changes to the claims were considered. In particular, the limitation of "having sub-micron variations" was considered, as well as the limitation that the surface relief was a diffracting optical element. Although these possibilities were discussed, no agreement was reached as to allowability. The Examiner also pointed out problems in the use of ranges within ranges in claim 110 and the use of "such as" phrases in other claims. Applicants are now submitting a full amendment to consider these possibilities. Independent claims 73 and 105 have now been amended to recite the diffracting

optical element. New claims 123 and 124 recite the sub-micron surface variations. A number of claims have been amended to improve their language including the problems pointed out by the Examiner. The various ranges in claim 110 have now been stated separately in claims 125-128.

Rejection Under 35 USC 103

Claims 73-90, 97-101 and 105-115 stand rejected under 35 USC 103 as being obvious over Hori et al. (U.S. Patent 4,293,599) in view of Choquette et al. (U.S. Patent 5,861,113) and further in view of Mallik et al. (U.S. Patent 5,085,514). This rejection is respectfully traversed.

The Examiner relies on Hori et al. to teach a method of producing a surface relief pattern in a non-metallic layer coated on the substrate. The Examiner admits that Hori et al. does not specifically teach that this substrate is provided with a colored layer nor that the surface relief is provided with a diffraction pattern or metallic hologram. The Examiner relies on Choquette et al. to show that a surface relief pattern may be further coated to provide holographic or diffraction pattern effects. The Examiner relies on Mallik et al. to show the use of holographic images to provide tamper-proof or decorative products.

First, Applicants submit that it would not be obvious to combine these references. In the Hori et al. device, the decorative relief is of a relatively large size, such as a paint roller. This is different from the additional two references which rely on much smaller objects. Thus, Applicants submit that it would not be obvious to modify this paint roller-sized object with teachings that are related to microscopic variations.

Furthermore, Applicants submit that claims 73 and 105, as amended, are not rendered obvious by any combination of these three references. In particular, the independent claims now make it clear that the surface relief-forming part includes a diffracting optical element. This is not taught in any of the three references and it would not be obvious over their combination. Since there is no teaching of such a feature in either reference, Applicants submit that independent claims 73 and 105 are patentable over this combination.

Furthermore, Hori et al. is used for surface variations up to 10 mm and thus is not in any way useful with regard to replication of diffracting optical elements, such as holograms.

Further, none of the references suggest a color layer on the metal substrate to enhance visual effects generated by the surface relief when it receives external illumination. The Examiner states that Hori et al. teaches how to provide a multi-

colored layer on the relief pattern. However, this multi-colored layer is only provided to bring out the pattern of the relief in a more decorative manner by spraying paint over the pattern and not for enhancing visual effects of the relief. For these reasons, Applicants submit that claims 73 and 105 are allowable.

Claims 74-82, 84-90, 97-100, 106-108, 110-115 and 123-128 depend from these allowable claims and as such as also considered to be allowable. In addition, each of these claims has additional features which make these claims additionally allowable. These additional features include the arrangement of the color print layer, the material of the various layers, the thicknesses of the layers and other features.

In view of the above remarks, it is believed that the claims clearly distinguish over the patents relied upon by the Examiner, either alone or in combination. In view of this, reconsideration of the rejection and allowance of all of the claims are respectfully requested.

CONCLUSION

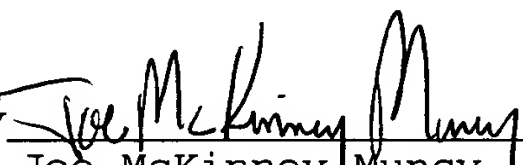
In the event that any outstanding matters remain in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), the Applicants respectfully petition for a three (3) month extension of time for filing a response in connection with the present application and the required fee of \$980.00 is attached herewith.


If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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